

Waste Site Cleanup Advisory Committee

February 28, 2019

Agenda - times are approximate

9:30 Program updates – Paul Locke

General updates, PFAS public hearing recap, PFAS site work

10:00 NRD regulation development update – Karen Peltó

10:10 MCP Amendments public hearing draft preview
– Liz Callahan & Paul Locke

11:00 Lab audit update – Ken Marra

11:10 Identifying exposure conditions in IRA Submittals with
natural language processing
– Matthew Fitzpatrick, BWSC/CERO & Rushikesh Naidu, WPI

11:50 Adjourn

MassDEP



310 CMR 40.0000: MASSACHUSETTS CONTINGENCY PLAN

Section

SUBPART A: GENERAL PROVISIONS

40.0001: Authority
40.0002: Purpose
40.0003: Applicability
40.0005: Effective Dates
40.0006: Terminology, Definitions, and Acronyms
40.0007: Rules of Construction
40.0008: Computation of Time Periods and Deadlines
40.0009: Certification of Submittals
40.0010: Effect of Orders and Appeals
40.0011: Confidentiality of Information
40.0013: Presumption of Irreparable Harm
40.0014: Document Retention
40.0015: Content of Waste Site Cleanup Activity Opinions
(40.0016: Laboratory Certification: Reserved)
40.0017: Environmental Sample Collection and Analyses
40.0018: Health and Safety Procedures
40.0019: Violations of Environmental Restrictions
40.0020: Violations of a Permanent or Temporary Solution
40.0021: Unlawful Interference with Response Actions
40.0022: Accurate and Timely Submittal of Documents
40.0023: Accurate and Complete Record-keeping
40.0024: Timely Action and Anticipatory Noncompliance
40.0025: Extensions of Deadlines and Time Periods for *Force Majeure*
40.0027: Remedial Monitoring Report
40.0028: Well Maintenance and Security
40.0030: Management Procedures for Remediation Waste
40.0031: General Provisions for the Management of Remediation Waste
40.0032: Contaminated Media and Contaminated Debris
40.0033: ~~Uncontained~~ Waste
40.0034: Bill of Lading Process
40.0035: Bill of Lading Form
40.0036: Management Requirements for Storing Remediation Waste
40.0040: Management Procedures for Remedial Wastewater and Remedial Additives
40.0041: General Provisions for the management of Remedial Wastewater and/or Remedial Additives
40.0042: Remedial Wastewater Discharges to Surface Water
40.0043: Remedial Wastewater Discharges to Publicly Owned Treatment Works (POTW)
40.0044: Remedial Wastewater Discharges to Non-publicly Owned Treatment Works
40.0045: Remedial Wastewater Discharges to the Ground Surface or Subsurface and/or Groundwater
40.0046: Application of Remedial Additives
40.0047: Reporting Requirements for Discharges of Remedial Wastewater and Remedial Additives
40.0049: Remedial Air Emissions
40.0050: Appeals of Orders and Permits
40.0051: Appeals Relative to Administrative Penalties
40.0060: Special Project Designation Permits
40.0061: Purpose and Eligibility
40.0062: Procedures for Applying Special Project Designation
40.0063: Approval of Applications for Special Project Designation Permits, and Special Project Designation Permit Modifications, Transfers or Extensions
40.0064: Special Project Designation Conditions
40.0065: Modification of Special Project Designation Permit
40.0066: Transfer of Special Project Designation Permit
40.0067: Suspension of Special Project Designation Permit
40.0068: Revocation of Special Project Designation Permit
40.0069: Appeal Process for Special Project Designation Permits

MCP Amendments Public Hearing Draft

MassDEP



Schedule

Upon final approval...

- Inter-Agency Notice Period
- Publication in the Massachusetts Register...
 - 2 ½ - 3 month Public Comment Period
 - 3-4 Public Hearings
- Review Comments/Revise
- Publish final regulations
 - Effective date - RCs take effect on date of publication; other provisions take effect 2 months from publication; optional use of Method 1 Standards during 2 mo period
 - Outreach/training



Notes to Reviewers

- Redline version contains notes ahead of changes to guide reviewer that describe intent of change and reference related changes
- The redline version contains the *entire* MCP, plus 97 NTRs

Written Comments

- We encourage detailed written comments, including suggested rewording
- Reflect on how proposals will play out at real sites
- Unforeseen issues?

Preview Topics

- Program Coordination
 - NAULs at Federal Sites
 - UST Sites
 - Radioactive Materials
 - GW-1 Areas (Drinking Water)
- Climate Change
- Remedial Additives
- Tier Classification
- Temporary Solution Status Reports
- Post-PS Remedial Actions
- AEPMs
- AULs for LNAPL
- GPS Coordinates
- Improved Communication (Notice)
- Liquified Gasses
- PFAS Standards/Notification Requirements
- Risk Assessment
 - Gardening Exposures
 - Exposure Point Concentrations
 - Hierarchy of Toxicity
 - Imminent Hazards
 - Other Method 1 Standards
- Waste Deposits

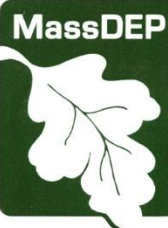


Cross-Program Coordination: NAULs at Federal Sites

Clarifies requirements for Notices of Activity & Use Limitations at a CERCLA Site

- Unevaluated changes in activities/uses inconsistent with AUL requires notice to MassDEP and EPA and response actions to restore the remedy
- Clarifies which MCP provisions to NAULs apply to CERCLA sites
- Describe CERCLA status that corresponds to MCP Permanent Solution or Remedy Operation Status - to facilitate use of NAULs at a range of sites

NTR #16 & 22, 310 CMR 40.0020(5) & 40.0111

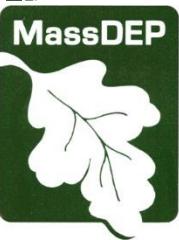


Cross-Program Coordination: Underground Storage Tanks (UST)

MCP notification provisions for tank tightness testing to be consistent with the UST Program regulations.

- Change from 527 CMR 9.00 to 310 CMR 80.00
- Explicitly reference tightness test at 310 CMR 80.32

NTR #28 & #29, 310 CMR 40.0313(2) & 40.0314



Cross-Program Coordination: Radioactive Material

“Adequately regulated” provisions for disposal sites with Radioactive Materials - intended to minimize duplicative oversight by MassDEP & MassDPH Radiation Control Program.

- Licensed facilities with only Radioactive Material => MassDPH RCP
- Licensed facilities with both Radioactive Material and other OHM...
Rad Material => MassDPH RCP and other OHM => MCP RTN
- Non-licensed facilities => MCP RTN, with Rad Material addressed under MCP, but consistent with RCP procedures; AUL required for Rad Material emitting above background.

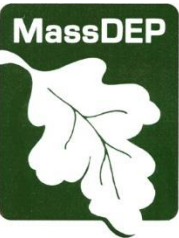


Cross-Program Coordination: Drinking Water (GW-1)

Amends criteria for determining drinking water areas (GW-1 areas) to align with areas protected by the drinking water regulations

- Excludes (not GW-1) Zone A of Class A surface water for “emergency supplies” approved by DEP
- Includes (again, not GW-1) permitted landfills and wastewater residual monofills to NPDWSA land use list

NTR #7 & #12, 310 CMR 40.0006

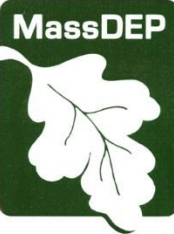


Update Petroleum Contamination in in Zone II GW-1 Areas

Clarifies that the presence of non-petroleum hydrocarbon contaminants does not necessarily preclude the use of this provision.

- For the purposes of THIS provision, defines “petroleum hydrocarbons”... excludes additives
- Eliminates the “contamination is limited to oil” language
- Non-petroleum contaminants may exist at site, must meet usual requirements

NTR #60, 310 CMR 40.0924(6)(c)

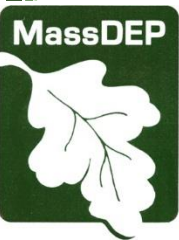


Climate Change

Emphasize that anticipated climate change impacts are relevant to response actions and MCP outcomes.

- MCP requirements to consider “foreseeable future” site conditions includes obligation to consider climate change
- Adds use of accurate & up-to-date “models” to RAPS
- Adds consideration of relevant EOEEA policies & guidelines

NTR #5, #25 & #71, 310 CMR 40.0006, 40.0191(1) & 40.1005(1)

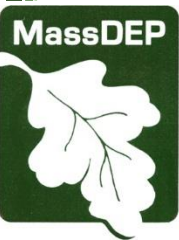


Remedial Additives

Further refines 2014 changes related to notice/ approval process for use of additives

- Need for prior approval for additives applied near school/daycare/residence narrowed to treatment of volatile OHM or additives that result in volatilization
- Shortens presumptive approval time from **30 to 21 days**
- Specifies how request for approval is requested (IRAP, RAM Plan or RIP) and identified (clearly)

NTR #21, 310 CMR 40.0046(3)

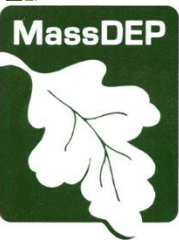


Tier Classification & Extensions (1)

Clarifies how Tier *Re*-Classification occurs and with what documentation

- Reclassification (Tier I <-> Tier II) does not need a new Phase 1 – just information relative to Tier I criteria
- Reclassification requires public involvement

NTR #46, 310 CMR 40.0520-40.0530



Tier Classification & Extensions (2)

Clarifies the need to maintaining Tier Classification until a Permanent Solution is achieved.

- 45-day “prior” submittal requirement eliminated – extensions effective for 2 years
- Tier Classification must be maintained until a Permanent Solution/ROS is achieved
- Temporary Solutions must maintain their Tier Classification
- Post-Temporary Solution Status Reports automatically maintain Tier Classification

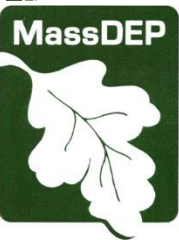


Temporary Solution Status & Remedial Monitoring Reports

Clarifies and standardizes requirements for post-Temporary Solution Status Reports.

- 6-month status reports required for Temporary Solutions with Active O&M regardless of TS category.
- Annual status reports required for a Temporary Solution without Active O&M, ***except***
 - Where alternative schedules presumptively approved by DEP (up to every 5 years)

NTR #58, 310 CMR 40.0898



AEPMs

Continued evolution of new 2014 requirements for Active Exposure Pathway Mitigation Measures as part of Permanent Solutions, Temporary Solutions & ROS

- Focus on measurement of system vacuum for SSDS
- Addresses monitoring for drinking water AEPMs (and eliminates remote telemetry)
- Spells out registration process
- Modifies annual certification to include acknowledgement of requirement to notify for systems done 30 days (and related addition to Obligations list in AUL)
- Placeholder for transition to continuous monitoring

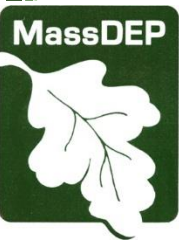
NTRs #75, 76 & 77



Post-Permanent Solution Remedial Actions, 310 CMR 40.1067

- Incorporate management of Contaminated Groundwater in addition to Contaminated Soil
- Can use URAMs in addition to RAMs to conduct work
- Remove provisions related to remedial actions at sites with Temporary Solution status

NTRs #83, 84 & 85

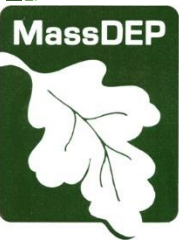


AULs for LNAPL

Limits the requirement for an AUL to visible/anticipated levels of NAPL greater than ½ inch in thickness.

- Consistent with intent in 2014 to focus AUL requirement on residual NAPL that warrants notice and potential management
- Consistent with the enforcement discretion position stated in MassDEP's 2016 guidance, *Light Nonaqueous Phase Liquids (LNAPL) and the MCP: Guidance for Site Assessment and Closure*.

NTR #72, 310 CMR 40.1012(2)(d)

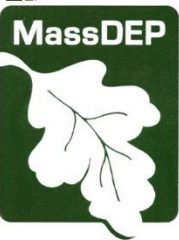


GPS Coordinates

Proposal to incorporate GPS coordinates for the location of monitoring wells in MCP submittals.

- Continues the migration to “better” and more accurately tracked data
- Opportunities for better understanding of regional conditions, such as groundwater depth & flow
- Enhance the availability of map-based disposal site information for program stakeholders

NTR #11, 310 CMR 40.0006 (definition of Monitoring Well)



Improved Communication (1)

Notice to Affected Individuals upon confirming the presence of an IH or CEP and the posting of the notice in multi-unit and commercial/industrial buildings to inform building occupants.

- Notification within 72 hours of confirmation
- Posting required for duration of IRA
- Copy to MassDEP in next Status Report

NTR #94, 310 CMR 40.1403(11)

MassDEP

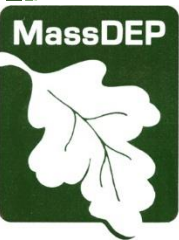


Improved Communication (2)

Written notices to local officials and other parties required under the public involvement provisions may now be sent by email rather than by mail if there is written agreement between parties.

- OPTIONAL as long as it is agreed to among parties

NTR #93, 310 CMR 40.1403(2)

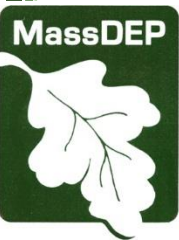


Notifications for Liquefied Gasses

Notification exemption for notification to MassDEP of releases of liquid nitrogen or liquid oxygen, with caveats...

- RQs for OXYGEN (LIQUID), NITROGEN (LIQUIFIED) = 10 lbs remain unchanged
- MCP notification not required if (and only if) releases are managed according to requirements specified by local public safety officials overseeing the response.
- Message: tell local firefighters & do what they say & stay out of the MCP

NTR #33, 310 CMR 40.0317(24)



PFAS

Added Method 1 standards and RCs for perfluoroalkyl substances—PFAS—emerging contaminants of concern for exposure in drinking water.

- NTR includes very specific PFAS-related questions about toxicity, cumulative impact, analytical limitations, etc...
- Public comment received on MCP proposal will inform possible revision of MassDEP ORSG and possible development of a Massachusetts Maximum Contaminant Level (MMCL)

NTR #65, Many Tables in 310 CMR 40.0900 & 40.1600

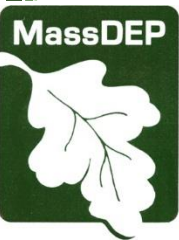


Gardening

Provides more detail on when Best Management Practices for Gardening are required and how to implement qualitative assessment of pathway

- Clarifies Method 1 can be used and is presumed to be protective of gardening-related exposures
- Under Method 3, exposures must be quantified UNLESS
 - BMPs are implemented (current use) or recommended (future use)
 - Permanent Solution with Conditions documents/discusses the pathway and BMPs

NTR #62, 310 CMR 40.0942(1)(e)

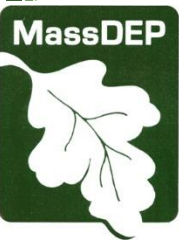


Exposure Point Concentrations

Incorporate up-to-date methodologies and strategies for determining EPCs and appropriately account for contaminant distribution and variability.

- Maximum Value vs Arithmetic Mean (75/10 rule) vs Upper Confidence Limit on the mean (90th/95th percentiles)
- Separate discussions for groundwater, soil, indoor air, sediment, surface water, Hot Spot & Upper Concentration Limit calculations
- Retain a simple approach for simple sites

NTR #61, 310 CMR 40.0926

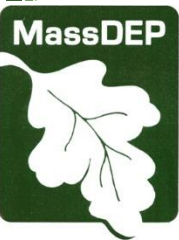


Hierarchy of Toxicity

Specifies requirements for identifying toxicity values for Method 3 risk characterization, including requiring the use of values developed by MassDEP and listed in regulation.

- Listed toxicity values include perchlorate, MtBE, PCE, PFAS...
- List of potential sources for toxicity information listed with preference given for consideration

NTR #67, 310 CMR 40.0993(7) & (8)

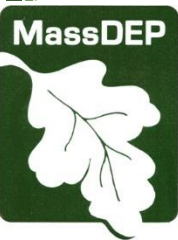


Imminent Hazards

Updated surficial soil concentrations indicative of a potential Imminent Hazard and amendment to the IH risk management criteria to remove ambiguity in identifying IH conditions.

- New numbers reflect new toxicity info & 2014 methodology (As, Cd, Hg & PCBs affected)
- ELCR/HI “is greater than” changed to “is equal to or greater than” the risk limit
- Eliminates uncertainty & “rounding bias” ...
E.g., Is a Hazard Index = 1.47 an Imminent Hazard for TCE?

NTR #34 #63, 310 CMR 40.0321 & 40.0955



Method 1 Standards Update (1)

Update MCP Method 1 numerical cleanup standards, Method 2 Direct Contact Standards, Method 3 UCLs and corresponding Reportable Concentration (RCs)

- Reflect more recent scientific and technical information on chemical exposure and toxicity
- Documentation available, *“Summary of Proposed MCP Method 1 Standards Revisions (2018)”*
- Excel spreadsheet available to review calculations
- Also added a few new hazardous materials...

NTR #65, Many Tables in 310 CMR 40.0900 & 40.1600



Method 1 Standards Update (2)

- Of the 1440 current GW and SW standards, 264 change (18%).
 - The majority of those changes are relatively small changes (usually up) due to updating the exposure factors

GW Standards:	12 of 360 change	8 up, 4 down
Soil-1 Standards:	86 of 360 change	62 up, 24 down
Soil-2 Standards:	81 of 360 change	58 up, 23 down
Soil-3 Standards:	85 of 360 change	62 up, 23 down
RC:	62 of 480 change	52 up, 10 down

- Addition of PFAS chemicals (gw and soil)



Explicitly Address Waste Deposits

Ensure appropriate risk characterization of manufactured gas plant waste and other waste deposits in soil.

- Yes, apparently it is necessary to spell out that waste deposits must be explicitly evaluated
- Waste deposits = Hot Spots, by definition
- UCL comparison includes comparison to concentrations within the waste itself

NTR #9, #10 & #68, 310 CMR 40.0006 & 40.0995 & 40.0996(2)

